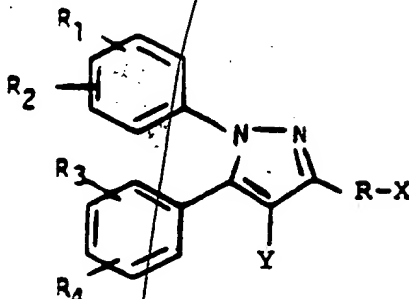


WHAT IS CLAIMED IS:

1. A compound having a structure that corresponds to the formula:



wherein

R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are the same or different and are individually selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, phenyl, halo, hydroxy, lower alkylsulfonyl, lower alkylthio, nitro, trifluoromethyl, omega-trifluoromethyl lower alkoxy, amino, acetamido, carboxy, alkylhydroxamic acid, or where R<sub>1</sub>R<sub>2</sub> or R<sub>3</sub>R<sub>4</sub>, taken together with the phenyl group to which they are attached, form a naphthyl or substituted naphthyl group;

R is a straight chained, saturated or unsaturated hydrocarbon that contains 2-16 carbon atoms;

Y is hydrogen, bromo, chloro or lower alkyl;

and X is selected from the group consisting of carboxy, hydroxy, acetoxy, alkanoyloxy, lower alkoxy, lower alkyl carbonyl, oximino, cyano, amino, C(O)-R<sub>5</sub> and -C(O)C(O)-R<sub>5</sub> wherein R<sub>5</sub> is selected from the group consisting of hydrogen, alkyl, lower alkoxy, NR<sub>6</sub>R<sub>7</sub> wherein R<sub>6</sub> and R<sub>7</sub> are the same or different and are selected from the group consisting of hydrogen and lower alkyl, or R<sub>6</sub> or R<sub>7</sub> are selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, hydroxy, acyloxy, benzyloxy, 2-hydroxy lower alkyl, lower alkyl carboxy, phenyl, substituted phenyl, pyridyl, thiazolyl, dihydrothiazolyl, 5-tetrazolyl,

- OCO(CH<sub>2</sub>)<sub>n</sub>COR<sub>9</sub> wherein R<sub>9</sub> is -OH, -ONa, dialkylamino such as diethylamino and morpholino, and n is 2 or 3; -OCOR<sub>10</sub> wherein R<sub>10</sub> is -CH<sub>2</sub>NR<sub>11</sub>R<sub>12</sub> wherein R<sub>11</sub> and R<sub>12</sub> are alkyl, such as methyl, cycloalkyl such as cyclohexyl, or together are a heterocyclic ring such as N-methylpiperazino, -OCOR<sub>10</sub> wherein R<sub>10</sub> is -CH<sub>2</sub>Cl, -CH<sub>2</sub>O-loweralkyl or t-butyl, -CH-loweralkyl-CO<sub>2</sub>-Q, wherein Q is lower alkyl or -H, acyl such as acetyl, propionyl or butyryl; -NR<sub>8</sub>OH wherein R<sub>8</sub> is hydrogen, -CO-loweralkyl, -CO-t-butyl, -COC<sub>7</sub>H<sub>15</sub>, -CO-phenyl, SO<sub>2</sub>-lower alkyl, -COCO<sub>2</sub>-lower alkyl, and -COCONHOH; -NHR<sub>13</sub> wherein R<sub>13</sub> is hydrogen, -CO-lower alkyl, -CO-t-butyl, -COC<sub>7</sub>H<sub>15</sub>, -CO-phenyl, -SO<sub>2</sub>-lower alkyl, -COCO<sub>2</sub>-lower alkyl, -COCONHOH, -COCO<sub>2</sub>H, COCON(lower alkyl)OH, and PO(O-lower alkyl)<sub>2</sub>; -C(R<sub>14</sub>)=NNH-2-thiazolino, -CH(OH)R<sub>14</sub> and -C(O)R<sub>14</sub> wherein R<sub>14</sub> is hydrogen, lower alkyl, phenyl and t-butyl; -C(=NOH)NH<sub>2</sub> and -C(=NH)N(OH)-lower alkyl, ω-alkanoate and O-NR<sub>8</sub>R<sub>9</sub> wherein R<sub>8</sub> and R<sub>9</sub> are the same or different and are selected from the group consisting of hydrogen, lower alkyl, phenyl and substituted phenyl;
- with the provisos that:
- (a) when Y is bromo or chloro, X is -COOH, -CH<sub>2</sub>OH or -C(O)-R<sub>5</sub> wherein R<sub>5</sub> is NR<sub>6</sub>R<sub>7</sub> and R<sub>6</sub> is OH and R<sub>7</sub> is lower alkyl;
- (b) at least one of R<sub>1</sub> and R<sub>2</sub> is other than hydrogen where (i) R-X is (CH<sub>2</sub>)<sub>2</sub>CO<sub>2</sub>H or (CH<sub>2</sub>)<sub>2</sub>C(O)NHOH, and (ii) R<sub>3</sub> and R<sub>4</sub> are 4-methoxy, 3-methoxy-4-hydroxy, 2-hydroxy and hydrogen and
- (c) at least one of R<sub>1</sub> and R<sub>2</sub>, or of R<sub>3</sub> and R<sub>4</sub> is other than hydrogen where R-X together contains three saturated carbon atoms linked together by carbon-carbon bonds; and pharmaceutically acceptable salts

thereof.

2. The compound according to claim 1 wherein  $R_2$  and  $R_4$  are hydrogen, and  $R_1$  and  $R_3$  are selected from the group consisting of halo, trifluoromethyl, lower alkyl and lower alkoxy.

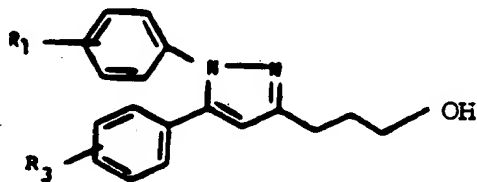
3. The compound according to claim 2 wherein R is straight chained, saturated and contains three carbon atoms bonded together by carbon-carbon bonds.

4. The compound according to claim 3 wherein X is selected from the group consisting of hydroxy, carboxy, a carboxylate salt of a pharmaceutically acceptable cation,  $C(O)-NR_6R_7$  wherein  $R_6$  and  $R_7$  are selected from the group consisting of hydrogen, hydroxyl, methyl, t-butyl, 2-hydroxyethyl and carboxymethyl.

5. The compound according to claim 2 wherein R is unsaturated and contains 2-16 carbon atoms.

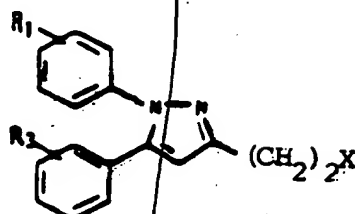
6. The compound according to claim 5 wherein X is carboxyl or a salt thereof.

7. A compound having a structure that corresponds to the formula:



wherein  $R_1$  and  $R_3$  are selected from the group consisting of halo, trifluoromethyl, methyl and methoxy.

8. A compound having a structure that corresponds to the formula:



wherein  $R_1$  and  $R_2$  are selected from the group consisting of halo, trifluoromethyl, methyl, phenyl and methoxy; and

X is selected from the group consisting of carboxy,  $C(O)-R_5$  wherein  $R_5$  is selected from the group consisting of  $N(CH_3)OH$ ,  $N(t-C_4H_9)OH$ ,  $NHOH$ ,  $ONH(CH_3)$  and  $ONH(t-C_4H_9)$ .

9. A compound of claim 1 which is 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]N-hydroxy-N-methylpropanamide.

10. A compound of claim 1 which is 5-(4-chlorophenyl)-3-(3-hydroxypropyl)-1-(4-methoxyphenyl)pyrazole.

11. A compound of claim 1 which is 5-(4-trifluoromethylphenyl)-3-(3-hydroxypropyl)-1-(4-methoxyphenyl)pyrazole.

12. A compound of claim 1 which is 1-(4-bromophenyl)-5-(4-chlorophenyl)-3-(3-hydroxypropyl)pyrazole.

13. A compound of claim 1 which is sodium 8-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-5(2)-octenoate.

14. A compound of claim 1 which is sodium 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]propanoate.

<sup>3</sup>  
15. A compound of ~~claim 1~~ which is  
3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-~~N-tert-butyl-N-hydroxypropanamide.~~

<sup>4</sup>  
16. A compound of ~~claim 1~~ which is  
N-carboxymethyl-3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-propanamide.

<sup>5</sup>  
17. A compound of ~~claim 1~~ selected from the  
group consisting of N-carboxymethyl-3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-propanamide,

3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-N-hydroxy-N-isopropylpropanamide, 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-N-cyclohexyl-N-hydroxypropanamide, and 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-N-ethyl-N-hydroxypropanamide.

<sup>6</sup>  
18. A compound of ~~claim 1~~ selected from the  
group consisting of 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-N-hydroxy-N-phenylpropanamide, 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]propylamine, 3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]propanal,  
5-(4-chlorophenyl)-3-(3-oximino-propyl)-1-(4-methoxyphenyl)-pyrazole and 3-(3-hydroxypropyl)-1-(4-methoxyphenyl)-5-(4-tolyl)pyrazole.

19. A pharmaceutical composition for topical, oral, parenteral and aerosol administration, comprising an effective amount of a substituted pyrazole compound according to claim 1 as active ingredient dispersed in a pharmaceutically acceptable carrier.

<sup>31</sup>  
20. The pharmaceutical composition according to claim 19 wherein said substituted pyrazole compound is capable of inhibiting both the cyclooxygenase and lipoxygenase pathways in the amount present in the composition when said composition is introduced into a mammal.

21.<sup>13</sup> A method for alleviating inflammation in a mammal exhibiting an inflammatory response comprising administering to said mammal a pharmaceutical composition according to claim 19.<sup>31</sup>

5 22.<sup>14</sup> A method for treating inflammatory conditions of skin, including psoriasis or other dermatitis, comprising administering to said mammal a pharmaceutical composition according to claim 19.<sup>31</sup>

23. A method for treating myocardial insufficiencies, including angina, vasospasm, infarction, comprising administering to said mammal a pharmaceutical composition comprising an amount effective against myocardial insufficiency, of a substituted pyrazole compound according to claim 1 as active ingredient, dispersed in a pharmaceutically acceptable carrier.

24. A method for treating asthma and allergic hypersensitivity diseases comprising administering to said mammal an effective amount of a pharmaceutical composition according to claim 19.<sup>31</sup>

20 25. A method for synthesizing a 1,5-diaryl-3-(omega-substituted lower alkyl)-pyrazole of claim 1 comprising reacting an arylhydrazine with a 1-aryl-(omega-substituted)-alkyl-1,3-dione containing at least 4 carbons in the alkyl chain, said reaction being carried out in a solvent that is substantially inert to said reaction conditions, and said omega-substituent being substantially inert to said reaction conditions, wherein said aryl groups are the same or different and are mono- or di-substituted phenyl wherein said phenyl substituents are selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, phenyl, halo, hydroxy, lower alkylsulfonyl, lower alkylthio, nitro, trifluoromethyl, omega-trifluoromethyl lower alkoxy, naphthyl and substituted naphthyl.

26. <sup>31</sup> A compound of claim 1 which is  
3-[1-(4-methoxyphenyl)-5-(4-methylphenyl)-3-pyrazolyl]-  
N-hydroxy-N-methyl propanamide.

27. <sup>31</sup> A compound of claim 1 which is  
3-[1-(4-methoxyphenyl)-5-(4-methylphenyl)-3-pyrazolyl]-  
N-methyl-N-succinyloxypropanamide.

28. <sup>31</sup> A compound of claim 1 which is  
3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]-  
N'-N'-dimethylglycinyloxy-N-methylpropanamide.

29. <sup>31</sup> A compound of claim 1 which is  
N-[3-[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-3-pyrazolyl]  
propyl]-N,N'-dihydroxyoxamide.

30. <sup>31</sup> A compound of claim 1 which is  
N-acetyl-N-acetoxy[5-(4-chlorophenyl)-1-(4-methoxyphenyl)-  
3-pyrazolyl]propanamide.

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